

**ENVIRONMENTAL SERVICES  
SPB05-894P-DD**

**1. PARTIES**

THIS CONTRACT, is entered into by and between the State of Montana, Department of Administration, State Procurement Bureau, (hereinafter referred to as "the State"), whose address and phone number are Room 165 Mitchell Building, 125 North Roberts, PO Box 200135, Helena MT 59620-0135, (406) 444-2575 and **Water & Environmental Technologies**, (hereinafter referred to as the "Contractor"), whose nine digit Federal ID Number, address and phone number are 81-0534977, 480 East Park, Suite 200, Butte MT 59701, and (406) 782-5220.

**THE PARTIES AGREE AS FOLLOWS:**

**2. PURPOSE**

The purpose of this term contract is to establish a list of Environmental Service Providers in several service areas. All qualified offerors will be assembled into a multiple contractor term contract for use by state agencies and other public procurement units. The State makes no guarantee of use by any agency-authorized access to this term contract. However, through data conveyed by the Montana Department of Environmental Quality, Montana Department of Natural Resources and Conservation, and Montana Fish, Wildlife and Parks, it is anticipated that this term contract should access approximately 2.5 million dollars or more annually.

**3. EFFECTIVE DATE, DURATION, AND RENEWAL**

**3.1 Contract Term.** This contract shall take effect upon execution of all signatures, and terminate on June 30, 2007, unless terminated earlier in accordance with the terms of this contract. (Mont. Code Ann. § 18-4-313.)

**3.2 Contract Renewal.** This contract may, upon mutual agreement between the parties and according to the terms of the existing contract, be renewed in one-year intervals, or any interval that is advantageous to the State, for a period not to exceed a total of four additional years. This renewal is dependent upon legislative appropriations.

**3.3 Addition of Analytical Laboratory Contractor.** Proposals will be accepted between April 1 and May 1 of each calendar year from current firms requesting review of their qualifications to perform Analytical Laboratory Services as originally requested under RFP SPB05-894P. The state will evaluate each proposal received in the exact manner in which the original proposals for other categories were evaluated. If proposal passes the requirements as evaluated to perform Analytical Lab Services, the state will update that firms term contract to include the Analytical Lab Services category contingent on said firm being in good standing otherwise.

**4. NON-EXCLUSIVE CONTRACT**

The intent of this contract is to provide state agencies with an expedited means of procuring supplies and/or services. This contract is for the convenience of state agencies and is considered by the State Procurement Bureau to be a "Non-exclusive" use contract. Therefore, agencies may obtain this product/service from sources other than the contract holder(s) as long as they comply with Title 18, MCA, and their delegation agreement. The State Procurement Bureau does not guarantee any usage.

**5. COOPERATIVE PURCHASING**

Under Montana law, public procurement units, as defined in section 18-4-401, MCA, have the option of cooperatively purchasing with the State of Montana. Public procurement units are defined as local or state public procurement units of this or any other state, including an agency of the United States, or a tribal procurement unit. Unless the bidder/offeror objects, in writing, to the State Procurement Bureau prior to the

award of this contract, the prices, terms, and conditions of this contract will be offered to these public procurement units.

## **6. TERM CONTRACT REPORTING**

Term contract holder(s) shall furnish annual reports of term contract usage. Each report shall contain complete information on all public procurement units utilizing this term contract. Minimum information required to be included in usage reports: name of the agency or governmental entity who contacted you regarding a potential project; project title; agency contact person; if the project was not successfully negotiated, state the reason; number and title of contracts received; total dollar amounts for contracts received; the names of your company personnel involved in the project; and project status as of usage report date. The report for this term contract will be due on July 20<sup>th</sup> of each year.

Reported volumes and dollar totals may be checked by the State Procurement Bureau against State records for verification. Failure to provide timely or accurate reports is justification for cancellation of the contract and/or justification for removal from consideration for award of contracts by the State.

## **7. COST/PRICE ADJUSTMENTS**

**7.1 Cost Increase by Mutual Agreement.** After the initial term of the contract, each renewal term may be subject to a cost increase by mutual agreement. Contractor must provide written, verifiable justification for any cost adjustments they request during each renewal period. Contractor shall provide its cost adjustments in both written and electronic format.

**7.2 Differing Site Conditions.** If, during the term of this contract, circumstances or conditions are materially different than set out in the specifications, the Contractor may be entitled to an equitable adjustment in the contract price. The Contractor shall immediately cease work and notify, in writing, the State of any such conditions necessitating an adjustment as soon as they are suspected and prior to the changed conditions affecting the performance of this contract. Any adjustment shall be agreed upon in writing by both parties to the contract.

**7.3 Cost/Price Adjustment.** All requests for cost/price adjustment must be submitted between April 1st and April 30th along with written justification. Requests received after April 30th will not be considered unless written approval from the SPB Contracts Officer is given to submit at a later date. In no event will cost/price adjustments be allowed beyond May 15th. All requests that are approved will be incorporated by contract amendment and made effective July 1st of the next approved renewal period.

## **8. SERVICES AND/OR SUPPLIES**

**8.1 Service Categories.** Contractor agrees to provide to the State the following services:

**Water Quality Monitoring – Fixed Station and Probabilistic Design.** The statewide monitoring network has three components. The first component is the fixed station water quality-monitoring network. There are 38 fixed station sites located on streams throughout Montana where there are active USGS gauging stations. The USGS is currently contracted to collect all of the water chemistry samples. The State may also collect sediment samples for trace metal analyses. Remote sensing may be used to assess stream geomorphology, flood plain and watershed characteristics.

**Water Quality Monitoring - Lakes and Streams.** As part of the monitoring program, standards criteria and TMDL development, lakes will continue to be sampled collecting chemistry, physical, and habitat parameters. Stream sampling may include sediment and water chemistry, geomorphology, habitat, or sources of pollutants (e.g., pebble counts, channel cross-section, stream reach assessments, photo points, Rosgen Type II, etc GIS and remote sensing may be used to assess riparian habitats, and watershed physical characteristics.

**Water Quality Monitoring - Reference Sites.** As part of the monitoring program and standards criteria development, reference sites will continue to be identified and characterized as described above.

**TMDL Targets.** The TMDL program (within DEQ) will often need additional data in order to develop TMDL targets. Targets are quantitative water quality goals or “endpoints” that represent all the applicable narrative or numeric water quality standards. These targets, when achieved will represent full beneficial use support. This may require additional monitoring to determine reference condition when TMDL targets are based on narrative criteria or designated uses (water quality standards). Targets may be based on numeric water quality criteria, pollutant concentrations or loads, habitat or geomorphic measures, and/or biological criteria or populations. Targets are also used to determine the existing Water Quality Impairment Status (WQIS) of the streams on the 303(d) list. In most cases, the contractor will be required to write a report, which includes a recommendation and justification for one or more TMDL targets and also compare those targets to the existing conditions to determine WQIS. Communication with the State is crucial while deriving preliminary targets to ensure TMDL consistency across Montana.

**TMDL Source Assessment/Delineation.** The TMDL program (within DEQ) will often need additional data in order to link water quality impairments to their sources, or to allocate sources of pollutants. This may require data compilation, investigative monitoring and statistical analysis within a specified watershed, which can be used for source allocation, or the linkage of water quality impairments to causes and sources of impairment (e.g., sediment or land use practices). Quantitative source assessments may be conducted using field-based monitoring and/or interpretation and analysis of aerial photos, digital images, or GIS coverages depending upon impairment sources and available information. In most cases, contractors will be required to write a report that identifies what the major causes of impairment are and where the major sources of pollutants are located. DEQ will also need to have all pollution/pollutant sources quantified. The quantification of these loads will assist in both source load allocations and the total maximum daily loads. In addition, data collected during source assessments must be entered into an approved database structure or format and linkage to the National Hydrography Dataset (NHD) streams layer may be requested. The department may also request a cost/benefit analysis for implementing BMPs, which can be used for developing TMDL source allocations. Communication with the State is crucial while deriving assessing sources of pollutants to ensure TMDL consistency across Montana.

**TMDL Load Allocations.** The TMDL program (within DEQ) will often need additional data in order to develop load allocations in conjunction with the source assessment/delineation. Load allocations are the portion of a receiving water’s loading capacity that is attributed to existing or future point or non-point sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments. Allocation can be expressed as a percent reduction that results in a maximum allowable load or as performance-based, which demonstrates how BMPs will be applied and how they will reduce the current loads. Communication with the State is crucial while deriving preliminary load allocations to ensure TMDL consistency across Montana.

**Total Maximum Daily Loads.** The TMDL program (within DEQ) will often need additional data in order to develop Total Maximum Daily Loads (TMDLs). A TMDL is defined as the sum of the wasteload allocations to point sources, load allocations to non-point sources and natural background sources with a margin of safety considering seasonal variation. TMDLS can be expresses in terms of mass per time, toxicity, or other appropriate measures that relate to the State’s Water Quality Standards. Communication with the State is crucial while deriving preliminary TMDLs to ensure consistency across Montana.

**Stakeholder Participation.** The TMDL program (within DEQ) will often need additional assistance in order to develop implementation/restoration strategies and monitoring plans. These plans often require public involvement with the local stakeholders. These efforts typically results in developing the measures needed to achieve full beneficial use support or to monitoring the uncertainties that arise during the TMDL process. Offerors should be experienced in or have staff members with proper credentials to facilitate participation with local stakeholders.

**TMDL Effectiveness Monitoring.** Effectiveness monitoring will be required to evaluate the success of implementing a TMDL plan. Monitoring will often include the collection of some combination of chemical,

physical or biological data, which can be used to determine if water quality is improving over time. Most monitoring designs and techniques will be fairly straightforward and may only require visiting a site once per year. In most cases, the contractor will be required to write an annual report, which can be used to determine if water quality is improving.

**Water Quality Modeling.** The State, and in particular DEQ, uses contracted services in the development and/or application of watershed and water quality modeling tools and techniques in the development of TMDLs. Models may be used to assist in defining TMDL loading allocations, performing existing/potential conditions analysis, watershed scenario analysis, and/or standards attainment analysis. The types of models that may be employed include dynamic watershed loading models (i.e. SWAT, HSPF), water quality fate and transport models (i.e. QUAL2E, QUAL2K), stream temperature and/or shade models (i.e. SSTemp, HeatSource, Shadow), and multi-dimensional lake/reservoir models (i.e. CE QUAL W2). In addition, simpler modeling tools and techniques such as GIS-based Risk Assessment Modeling may be employed or developed based on project needs and resources. The DEQ may also seek assistance in the identification and/or development of simple modeling tools that may be implemented at the desktop that facilitate quick scenario applications. These tools should be able to focus on specific water quality issues such as sediment, nutrients, salinity, etc. and be tailored to the various (eco) regions across the state.

**Statistical Analysis.** The State may request that large data sets be statistically analyzed for determining trends or for making comparisons. This service area may include data compilation, organization, manipulation and analysis. These analyses may be used to validate environmental targets by comparing reference data to existing data. They may also be used to establish a relationship or linkage between indicators and targets, the estimated loads and how targets link to beneficial use support. Analyses should be appropriate for the type of data being analyzed. In many cases, the contractor will be responsible for determining and providing rationale for appropriate statistical analyses to address pre-formulated environmental hypotheses. Analyses must consider spatial and temporal variations. Analyses may range from providing simple descriptive statistics to reporting multifactor predictive analyses.

**Revegetation Services.** Revegetation Specialists are utilized by the State and other governmental entities to enhance and complete environmental project tasks. The services offered by Revegetation Specialists are planning, designing, implementation along with providing of supplies, materials and equipment necessary to carryout the tasks. If a firm does not have the staff or equipment to implant a project, they must then be able to demonstrate a plan for delivery of product and implementation of a project through subcontracting or professional cooperative agreements.

**Watershed Coordination.** Within the State of Montana, there are over 50 active watershed groups that are comprised of local stakeholders working together for the efficient use and preservation of the natural resources. The watershed groups typically work with State and Federal agencies to complete agreed upon tasks. The funding for the activities is usually in the form of State and Federal grant funds in which the group must apply and compete for the awards. Therefore, the watershed groups either designate or hire a professional coordinator to research and secure funds, organize public meetings, facilitate the public meetings, represent the group at local, regional, state and even national conferences.

**8.2 Reuse of Documents.** When the projects dictate a design or engineered approach, the State agrees that it will not apply the Contractor's designs to any other projects.

## **9. ENGINEERING ACCESS**

All of the firms selected may need to have access to engineering services depending on the nature of the project. The contractor(s) will be expected to use their own best judgment as to whether engineering services are needed for a given project. However, traditional engineering methodologies are not the emphasis of this RFP. It is a violation of State Statute to practice engineering or land surveying without a license.

## **10. PROJECT SELECTION**

**10.1 Project Identification.** The State will be responsible for identifying projects, contacting landowners and securing necessary permission/cooperation agreements, selecting a contractor, writing grant applications and approving project payments.

**10.2 Hazardous Materials.** The State will not initiate projects where it is known that hazardous materials are present. If there is an indication of a potential of hazardous materials, then the State will do testing prior to contacting the contractor. However, there is always the possibility of unforeseen problems resulting in the stoppage of a project.

**10.3 Meetings.** The selected contractor may be required to meet with State personnel at the project site to conduct a site evaluation, discuss project issues and begin the negotiation process on project feasibility, conceptual design and costs for each project.

**10.4 Approach Expectations.** In the case of restoration activities, the agency will identify the preferred techniques. The determination made by the State may define which contractor(s) are contacted for project initiation. The State is always open to new and innovative approaches that accomplish project goals.

## **11. SELECTING A CONTRACTOR**

The State may select a term contract holder from the Environmental Services contract home page as provided under the state's website address

<http://www.discoveringmontana.com/doa/gsd/procurement/TermContracts/environservices/Default.asp>, taking into consideration such things as the contractor's area of expertise, requirements and location of the project, the contractor's availability and access to resources necessary to efficiently and effectively complete the project, demonstrated excellent past performance on State and public projects, identified subcontractors and total project cost.

General. Ordering agencies shall use the procedures in this section when ordering services priced at hourly rates as established by each Term Contract (TC). The applicable service categories are identified in each TC along with the contractor's price lists.

Request for Quotation (RFQ) procedures. The ordering agency must provide an RFQ, which includes the statement of work and limited, but specific evaluation criteria (e.g., experience and past performance), to TC contractors that offer services that will meet the agency's needs. The RFQ may be posted to the agency's state website to expedite responses.

Statement of Work (SOWs). All SOW's shall include at a minimum a detailed description of the work to be performed, location of work, period of performance, deliverable schedule, applicable performance standards and any special requirements (e.g., security clearances, travel, special knowledge).

- (1) Ordering agency may select a contractor from the appropriate service category and directly negotiate a mutually acceptable project based on a sudden and unexpected happening or unforeseen occurrence or condition, which requires immediate action. (Exigency).
- (2) Ordering agency may place orders at or below the \$5,000 threshold with any TC contractor that can meet the agency's needs. The ordering agency should attempt to distribute orders among all service category contractors.
- (3) For orders estimated to exceed \$5,000 but less than \$25,000.
  - (i) The ordering agency shall develop a statement of work.
  - (ii) The ordering agency shall provide the RFQ (including the statement of work and evaluation criteria) to at least three TC contractors that offer services that will meet the agency's needs.

(iii) The ordering agency shall request that contractors submit firm-fixed prices to perform the services identified in the statement of work.

(4) For orders estimated to exceed \$25,000. In addition to meeting the requirements of (3) above, the ordering agency shall:

- (i) Provide the RFQ (including the statement of work and the evaluation criteria) to a minimum of six service category TC contractors (if category has less than 6, all contractors will be offered an RFQ) with a 50% replacement factor for each subsequent request for quote in the same service category.

Evaluation. The ordering agency shall evaluate all responses received using the evaluation criteria provided in the RFQ to each TC contractor. The ordering agency is responsible for considering the level of effort and the mix of labor proposed to perform a specific task being ordered, and for determining that the total price is reasonable. The agency will place the order with the contractor that represents the best value. After award, ordering agencies will provide timely notification to unsuccessful TC contractors. If an unsuccessful TC contractor requests information on a task order award that was based on factors other than price alone, a brief explanation of the basis for the award decision shall be provided.

Minimum documentation. The ordering agency shall document:

- (1) The TC contractors considered, noting the contractor from which the service was purchased.
- (2) A description of the service purchased.
- (3) The amount paid.
- (4) The evaluation methodology used in selecting the contractor to receive the order.
- (5) The rationale for making the selection.
- (6) Determination of price fair and reasonableness.

Agency project task orders will be utilized to finalize the project. Only written addenda will be used for adjustments of the task orders and must be signed by both parties. All task orders must contain signatures from both parties and appropriate agency legal review as directed in their procurement policy.

The State will monitor contractor selection by using the information provided in the annual TC usage reports.

Contractor's who fail to respond to three RFQ opportunities within a one-year period between July 1<sup>st</sup> and June 30<sup>th</sup> may be removed from the qualified list of contractors.

## **12. CONTRACTOR RESPONSIBILITIES**

**12.1 Supervision and Implementation.** The selected contractor for an individual project will be responsible for the supervision and implementation of the approach and will be responsible for oversight of work performed by all subcontractors. In most cases the contractor will provide and be responsible for all the necessary equipment, materials, supplies and personnel necessary for proper execution of the work. However, the State reserves the right to hire subcontractors (equipment and/or labor) if it will provide a cost savings to the State. The selected contractor will also be responsible for clean up of the sites if necessary and must have the sites inspected by the State immediately prior to completion.

**12.2 On-Site Requirements.** When a contractor is contacted by the State to discuss a project, the State and the contractor may visit the job site if deemed necessary by the Project Manager, to become familiar with conditions relating to the project and the labor requirements. The State will provide a detailed scope of work for the project and request the contractor supply the State with a response to project approach, cost, timeframe and any other information deemed necessary by the State to make a selection or complete a contract negotiation.

In the cases of Restoration or On-The-Ground Activities, the contractor shall adequately protect the work, adjacent property, and the public in all phases of the work. They shall be responsible for all damages or injury due to their action or neglect.

The contractor shall maintain access to all phases of the contract pending inspection by the State, the landowner, or their representative. All interim or final products funded by the contract will become the property of the State or Cooperative Purchaser upon payment for said products.

All work rejected as unsatisfactory shall be corrected prior to final inspection and acceptance. The contractor shall respond within seven calendar days after notice of observed defects has been given and shall proceed to immediately remedy these defects. Should the contractor fail to respond to the notice or not remedy the defects, the State may have the work corrected at the expense of the contractor.

**12.3 Clean Up (when project tasks require).** The contractor shall:

- Keep the premises free from debris and accumulation of waste;
- Clean up any oil or fuel spills;
- Keep machinery clean and free of weeds;
- Remove all construction equipment, tools and excess materials; and
- Perform finishing site preparation to limit the spread of noxious weeds before final payment by the State.

**12.4 Applicable Laws.** The contractor shall keep informed of, and shall comply with all applicable laws, ordinances, rules, regulations and orders of the City, County, State, Federal or public bodies having jurisdiction affecting any work to be done to provide the services required. The contractor shall provide all necessary safeguards for safety and protection, as set forth by the United States Department of Labor, Occupational Safety and Health Administration.

**12.5 Cooperation.** The contractor shall work closely with the States analytical consultants, (i.e. environmental laboratories and taxonomists) to develop the desired products.

**12.6 Work Acceptance.** The contractor is responsible for project oversight as needed. The State may also periodically provide personnel for administrative oversight from the initiation of the contract through project completion. All work will be inspected by the State or designated liaison prior to approval of any contract payments. All work rejected as unsatisfactory shall be corrected prior to final inspection and acceptance. Contractor shall respond within seven calendar days after notice of defects has been given by the State and proceed to immediately remedy all defects.

**12.7 Records.** The contractor will supply the State with documentation, when requested, of methods used throughout project implementation. Contractor will maintain records for themselves and all subcontractors of supplies, materials, equipment and labor hours expended.

**12.8 Communication.** Remoteness of project sites may necessitate that the contractor have some form of field communication such as a cellular phone. This communication is necessary to enable the State to respond to public concerns related to the project, accidents, inspections, or other project issues that require immediate feedback. In addition, the State or Cooperative Purchaser may require scheduled communication at agreed upon intervals. The communication schedule will be dependent upon the project circumstances and requirements of the contracting agency. In the case when a communication schedule is included in the Scope of Work, the schedule will commence when the contractor initiates the project.

**12.9 Change Of Staffing.** Since qualifications of personnel were key in determining which offerors were selected to be on this TC, a written notification of any changes in key personnel must be made to the state agency, prior to entering into negotiations to perform any specific work scope. Contractor shall replace such employee(s) at its own expense with an employee of substantially equal abilities and qualifications without additional cost to the agency. If these staffing changes cause the contractor to no longer meet the qualifications stated herein, that firm will be removed from the service area of this TC. Failure to notify the state agency of staffing changes could result in the contractor being removed from the TC listing and possible suspension from bidding on other state projects.

**12.10 Collaboration.** The State encourages collaboration between contractors to increase the scope of services offered. In cases where the chosen contractor is not able to provide all services needed for the

project, the State will expect the chosen contractor to contact other contractors on this list to negotiate subcontracts for these services before going elsewhere. Exceptions to this strategy will be evaluated on a case-by-case basis.

**12.11 Subcontractors, Project Budget and Invoicing.** All subcontractors to be used in any project must be approved by the authorized entity initiating the project. Project budgets will be negotiated for each individual project contract. However, all rates, terms and conditions set forth in this term contract will be applied to individual contracts. Subcontractor is defined as anyone other than the prime contractor having substantial direct involvement in a specific project.

The State reserves the right to choose the invoicing method from the following:

- Prime contractor's billing will include the subcontractors charges and payment will be made to the prime, or
- Prime and subcontractors will bill the State separately and the State will pay each directly.

### **13. CONSIDERATION/PAYMENT**

**13.1 Payment Schedule.** In consideration for the services to be provided, the State shall pay according to the negotiated agreement for each project. Hourly rates and miscellaneous charges as provided in Attachment B shall apply.

**13.2 Withholding of Payment.** The State may withhold payments to the Contractor if the Contractor has not performed in accordance with this contract. Such withholding cannot be greater than the additional costs to the State caused by the lack of performance.

### **14. CONTRACTOR REGISTRATION**

The Contractor will be registered with the Department of Labor and Industry under sections 39-9-201 and 39-9-204, MCA, *prior* to contract execution. The State cannot execute a contract for construction to a Contractor who is not registered. (Mont. Code Ann. § 39-9-401.)

Contractor Registration Number: 149197

### **15. CONTRACTOR WITHHOLDING**

Section 15-50-206, MCA, requires the state agency or department for whom a public works construction contract over \$5,000 is being performed, to withhold 1 percent of all payments and to transmit such monies to the Department of Revenue.

### **16. MONTANA PREVAILING WAGE REQUIREMENTS**

Unless superseded by federal law, Montana law requires that contractors and subcontractors give preference to the employment of Montana residents for any public works contract in excess of \$25,000 for construction or nonconstruction services in accordance with sections 18-2-401 through 18-2-432, MCA, and all administrative rules adopted pursuant thereto. Unless superseded by federal law, at least 50% of the workers of each contractor engaged in construction services must be performed by bona fide Montana residents. The Commissioner of the Montana Department of Labor and Industry has established the resident requirements in accordance with sections 18-2-403 and 18-2-409, MCA. Any and all questions concerning prevailing wage and Montana resident issues should be directed to the Montana Department of Labor and Industry.

In addition, unless superseded by federal law, all employees working on a public works contract shall be paid prevailing wage rates in accordance with sections 18-2-401 through 18-2-432, MCA, and all administrative rules adopted pursuant thereto. Montana law requires that all public works contracts, as defined in section 18-2-401, MCA, in which the total cost of the contract is in excess of \$25,000, contain a provision stating for each job classification the standard prevailing wage rate, including fringe benefits, travel, per diem, and zone pay that the contractors, subcontractors, and employers shall pay during the public works contract.



Furthermore, section 18-2-406, MCA, requires that all contractors, subcontractors, and employers who are performing work or providing services under a public works contract post in a prominent and accessible site on the project staging area or work area, no later than the first day of work and continuing for the entire duration of the contract, a legible statement of all wages and fringe benefits to be paid to the employees in compliance with section 18-2-423, MCA. Section 18-2-423, MCA, requires that employees receiving an hourly wage must be paid on a weekly basis.

Each contractor, subcontractor, and employer must maintain payroll records in a manner readily capable of being certified for submission under section 18-2-423, MCA, for not less than three years after the contractor's, subcontractor's, or employer's completion of work on the public works contract.

The nature of the work performed or services provided under this contract meets the statutory definition of a "public works contract" under section 18-2-401(11)(a), MCA, and falls under the category of Heavy Construction and Nonconstruction services. The booklets containing Montana's 2003 Rates for Heavy Construction and Nonconstruction Services are attached.

The most current Montana Prevailing Wage Booklet will automatically be incorporated at time of renewal. It is the contractor's responsibility to ensure they are using the most current prevailing wages during performance of its covered work.

## **17. ACCESS AND RETENTION OF RECORDS**

**17.1 Access to Records.** The Contractor agrees to provide the State, Legislative Auditor or their authorized agents access to any records necessary to determine contract compliance. (Mont. Code Ann. § 18-1-118.)

**17.2 Retention Period.** The Contractor agrees to create and retain records supporting the environmental services for a period of three years after either the completion date of this contract or the conclusion of any claim, litigation or exception relating to this contract taken by the State of Montana or a third party.

## **18. ASSIGNMENT, TRANSFER AND SUBCONTRACTING**

The Contractor shall not assign, transfer or subcontract any portion of this contract without the express written consent of the State. (Mont. Code Ann. § 18-4-141.) The Contractor shall be responsible to the State for the acts and omissions of all subcontractors or agents and of persons directly or indirectly employed by such subcontractors, and for the acts and omissions of persons employed directly by the Contractor. No contractual relationships exist between any subcontractor and the State.

## **19. HOLD HARMLESS/INDEMNIFICATION**

The Contractor agrees to protect, defend, and save the State, its elected and appointed officials, agents, and employees, while acting within the scope of their duties as such, harmless from and against all claims, demands, causes of action of any kind or character, including the cost of defense thereof, arising in favor of the Contractor's employees or third parties on account of bodily or personal injuries, death, or damage to property arising out of services performed or omissions of services or in any way resulting from the acts or omissions of the Contractor and/or its agents, employees, representatives, assigns, subcontractors, except the sole negligence of the State, under this agreement.

## **20. REQUIRED INSURANCE**

**20.1 General Requirements.** The Contractor shall maintain for the duration of the contract, at its cost and expense, insurance against claims for injuries to persons or damages to property, including contractual liability, which may arise from or in connection with the performance of the work by the Contractor, agents, employees, representatives, assigns, or subcontractors. This insurance shall cover such claims as may be caused by any negligent act or omission.

**20.2 Primary Insurance.** The Contractor's insurance coverage shall be primary insurance as respect to the State, its officers, officials, employees, and volunteers and shall apply separately to each project or location. Any insurance or self-insurance maintained by the State, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

**20.3 Specific Requirements for Commercial General Liability.** The Contractor shall purchase and maintain occurrence coverage with combined single limits for bodily injury, personal injury, and property damage of \$1,000,000 per occurrence and \$2,000,000 aggregate per year to cover such claims as may be caused by any act, omission, or negligence of the Contractor or its officers, agents, representatives, assigns or subcontractors.

**20.4 Additional Insured Status.** The State, its officers, officials, employees, and volunteers are to be covered and listed as additional insureds; for liability arising out of activities performed by or on behalf of the Contractor, including the insured's general supervision of the Contractor; products and completed operations; premises owned, leased, occupied, or used.

**20.5 Specific Requirements for Automobile Liability.** The Contractor shall purchase and maintain coverage with split limits of \$500,000 per person (personal injury), \$1,000,000 per accident occurrence (personal injury), and \$100,000 per accident occurrence (property damage), OR combined single limits of \$1,000,000 per occurrence to cover such claims as may be caused by any act, omission, or negligence of the contractor or its officers, agents, representatives, assigns or subcontractors.

**20.6 Additional Insured Status.** The State, its officers, officials, employees, and volunteers are to be covered and listed as additional insureds for automobiles leased, hired, or borrowed by the Contractor.

**20.7 Specific Requirements for Professional Liability.** The Contractor shall purchase and maintain occurrence coverage with combined single limits for each wrongful act of \$1,000,000 per occurrence and \$2,000,000 aggregate per year to cover such claims as may be caused by any act, omission, negligence of the Contractor or its officers, agents, representatives, assigns or subcontractors. Note: if "occurrence" coverage is unavailable or cost prohibitive, the Contractor may provide "claims made" coverage provided the following conditions are met: (1) the commencement date of the contract must not fall outside the effective date of insurance coverage and it will be the retroactive date for insurance coverage in future years; and (2) the claims made policy must have a three year tail for claims that are made (filed) after the cancellation or expiration date of the policy.

**20.8 Deductibles and Self-Insured Retentions.** Any deductible or self-insured retention must be declared to and approved by the state agency. At the request of the agency either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the State, its officers, officials, employees, or volunteers; or (2) at the expense of the Contractor, the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claims administration, and defense expenses.

**20.9 Certificate of Insurance/Endorsements.** A certificate of insurance from an insurer with a Best's rating of no less than A- indicating compliance with the required coverages, has been received by the State Procurement Bureau, PO Box 200135, Helena MT 59620-0135. The Contractor must notify the State immediately, of any material change in insurance coverage, such as changes in limits, coverages, change in status of policy, etc. The State reserves the right to require complete copies of insurance policies at all times.

## **21. COMPLIANCE WITH THE WORKERS' COMPENSATION ACT**

Contractors are required to comply with the provisions of the Montana Workers' Compensation Act while performing work for the State of Montana in accordance with sections 39-71-120, 39-71-401, and 39-71-405, MCA. Proof of compliance must be in the form of workers' compensation insurance, an independent contractor's exemption, or documentation of corporate officer status. Neither the contractor nor its employees are employees of the State. This insurance/exemption must be valid for the entire term of the contract. A renewal document must be sent to the State Procurement Bureau, PO Box 200135, Helena MT 59620-0135, upon expiration.

## **22. COMPLIANCE WITH LAWS**

The Contractor must, in performance of work under this contract, fully comply with all applicable federal, state, or local laws, rules and regulations, including the Montana Human Rights Act, the Civil Rights Act of 1964, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Any subletting or subcontracting by the Contractor subjects subcontractors to the same provision. In accordance with section 49-3-207, MCA, the Contractor agrees that the hiring of persons to perform the contract will be made on the basis of merit and qualifications and there will be no discrimination based upon race, color, religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing the contract.

## **23. INTELLECTUAL PROPERTY**

All patent and other legal rights in or to inventions created in whole or in part under this contract must be available to the State for royalty-free and nonexclusive licensing. Both parties shall have a royalty-free, nonexclusive, and irrevocable right to reproduce, publish or otherwise use and authorize others to use, copyrightable property created under this contract.

## **24. PATENT AND COPYRIGHT PROTECTION**

**24.1 Third Party Claim.** In the event of any claim by any third party against the State that the products furnished under this contract infringe upon or violate any patent or copyright, the State shall promptly notify Contractor. Contractor shall defend such claim, in the State's name or its own name, as appropriate, but at Contractor's expense. Contractor will indemnify the State against all costs, damages and attorney's fees that accrue as a result of such claim. If the State reasonably concludes that its interests are not being properly protected, or if principles of governmental or public law are involved, it may enter any action.

**24.2 Product Subject of Claim.** If any product furnished is likely to or does become the subject of a claim of infringement of a patent or copyright, then Contractor may, at its option, procure for the State the right to continue using the alleged infringing product, or modify the product so that it becomes non-infringing. If none of the above options can be accomplished, or if the use of such product by the State shall be prevented by injunction, the State will determine if the Contract has been breached.

## **25. CONTRACT TERMINATION**

**25.1 Termination for Cause.** The State may, by written notice to the Contractor, terminate this contract in whole or in part at any time the Contractor fails to perform this contract.

**25.2 Reduction of Funding.** The State, at its sole discretion, may terminate or reduce the scope of this contract if available funding is reduced for any reason. (See Mont. Code Ann. § 18-4-313(3).)

## **26. STATE PERSONNEL**

**26.1 State Contract Manager.** The State Contract Manager identified below is the State's single point of contact and will perform all contract management pursuant to section 2-17-512, MCA, on behalf of the State. Written notices, requests, complaints or any other issues regarding the contract should be directed to the State Contract Manager.

The State Contract Manager for this contract is:

Robert Oliver, Contracts Officer  
Room 165 Mitchell Building  
125 North Roberts  
PO Box 200135  
Helena MT 59620-0135  
Telephone #: (406) 444-0110

Fax #: (406) 444-2529

E-mail: [roliver@mt.gov](mailto:roliver@mt.gov)

**26.2 State Project Manager.** Each using State agency or Cooperative Purchaser will identify a Project Manager in the project task order. The Project Manager will manage the day-to-day project activities on behalf of the State/Cooperative Purchaser.

## **27. CONTRACTOR PERSONNEL**

**27.1 Change Of Staffing.** Since qualifications of personnel was key in determining which offerors were selected to be on this term contract list, a written notification to the State Procurement Bureau of any changes of key personnel must be made within two weeks of the change. These change notifications will be completed upon the departure or hiring of key personnel who are professional employees critical to awarded service areas. If these staffing changes cause the firm to no longer meet the qualifications stated herein, that firm will be removed from the service area of this term contract. Failure to notify the State Procurement Bureau of staffing changes could result in the contractor being removed from the term contract listing and possible suspension from bidding on other State projects.

**27.2 Contractor Contract Manager.** The Contractor Contract Manager identified below will be the single point of contact to the State Contract Manager and will assume responsibility for the coordination of all contract issues under this contract. The Contractor Contract Manager will meet with the State Contract Manager and/or others necessary to resolve any conflicts, disagreements, or other contract issues.

The Contractor Contract Manager for this contract is:

Dave Erickson  
480 East Park, Suite 200  
Butte MT 59701  
Telephone #: (406) 782-5220  
Fax #: (406) 723-1537  
E-mail: [derickson@wet-llc.com](mailto:derickson@wet-llc.com)

**27.3 Contractor Project Manager.** The Contractor Project Manager identified below will manage the day-to-day project activities on behalf of the Contractor:

The Contractor Project Manager for this contract is:

Josh Vincent  
480 East Park, Suite 200  
Butte MT 59701  
Telephone #: (406) 782-5220  
Fax #: (406) 723-1537  
E-mail: [jvincent@wet-llc.com](mailto:jvincent@wet-llc.com)

## **28. MEETINGS**

The Contractor is required to meet with the State's personnel, or designated representatives, to resolve technical or contractual problems that may occur during the term of the contract or to discuss the progress made by Contractor and the State in the performance of their respective obligations, at no additional cost to the State. Meetings will occur as problems arise and will be coordinated by the State. The Contractor will be given a minimum of three full working days notice of meeting date, time, and location. Face-to-face meetings are desired. However, at the Contractor's option and expense, a conference call meeting may be substituted. Consistent failure to participate in problem resolution meetings two consecutive missed or rescheduled meetings, or to make a good faith effort to resolve problems, may result in termination of the contract.

## **29. CONTRACTOR PERFORMANCE ASSESSMENTS**

The State may do assessments of the Contractor's performance. This contract may be terminated for one or more poor performance assessments. Contractors will have the opportunity to respond to poor performance assessments. The State will make any final decision to terminate this contract based on the assessment and any related information, the Contractor's response and the severity of any negative performance assessment. The Contractor will be notified with a justification of contract termination. Performance assessments may be considered in future solicitations.

## **30. TRANSITION ASSISTANCE**

If this contract is not renewed at the end of this term, or is terminated prior to the completion of a project, or if the work on a project is terminated, for any reason, the Contractor must provide for a reasonable period of time after the expiration or termination of this project or contract, all reasonable transition assistance requested by the State, to allow for the expired or terminated portion of the services to continue without interruption or adverse effect, and to facilitate the orderly transfer of such services to the State or its designees. Such transition assistance will be deemed by the parties to be governed by the terms and conditions of this contract, except for those terms or conditions that do not reasonably apply to such transition assistance. The State shall pay the Contractor for any resources utilized in performing such transition assistance at the most current rates provided by the contract. If there are no established contract rates, then the rate shall be mutually agreed upon. If the State terminates a project or this contract for cause, then the State will be entitled to offset the cost of paying the Contractor for the additional resources the Contractor utilized in providing transition assistance with any damages the State may have otherwise accrued as a result of said termination.

## **31. CHOICE OF LAW AND VENUE**

This contract is governed by the laws of Montana. The parties agree that any litigation concerning this bid, proposal or subsequent contract must be brought in the First Judicial District in and for the County of Lewis and Clark, State of Montana and each party shall pay its own costs and attorney fees. (See Mont. Code Ann. § 18-1-401.)

## **32. SCOPE, AMENDMENT AND INTERPRETATION**

**32.1 Contract.** This contract consists of 12 numbered pages, any Attachments as required, RFP # SPB05-894P, as amended and the Contractor's RFP response as amended. In the case of dispute or ambiguity about the minimum levels of performance by the Contractor the order of precedence of document interpretation is in the same order.

**32.2 Entire Agreement.** These documents contain the entire agreement of the parties. Any enlargement, alteration or modification requires a written amendment signed by both parties.

**33. EXECUTION**

The parties through their authorized agents have executed this contract on the dates set out below.

**DEPARTMENT OF ADMINISTRATION  
STATE PROCUREMENT BUREAU  
PO BOX 200135  
HELENA MT 59620-0135**

**WATER & ENVIRONMENTAL TECHNOLOGIES  
1485 CONTINENTAL DRIVE  
BUTTE MT 59701  
FEDERAL ID # 81-0534977**

BY: \_\_\_\_\_  
Penny Moon, Contracts Officer

BY: \_\_\_\_\_  
(Name/Title)

BY: \_\_\_\_\_  
(Signature)

BY: \_\_\_\_\_  
(Signature)

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

## ATTACHMENT A CONTRACTOR'S RESPONSE

### 1.0 INTRODUCTION

Water & Environmental Technologies (WET) is pleased to submit this proposal to the State of Montana for water quality monitoring, TMDL development, and watershed services listed in the Request for Proposal (RFP). We believe that our company possesses a well-experienced and team-oriented group of professionals, an important combination for successful completion of these multi-faceted environmental tasks. WET realizes the critical importance of the TMDL program on the long term preservation and recovery of Montana's water bodies. We believe our firm can assist the MDEQ in its implementation of the program, especially for projects located in Southwest Montana. This proposal will detail our Project Team's technical expertise and work experience, as well as its intangible qualities that make us well qualified to provide these services to the State of Montana.

WET is an innovative environmental consulting firm located in Butte, Montana. Our company was formed by a group of experienced environmental professionals serving a diverse client base throughout Montana and the western United States. WET provides professional environmental services addressing a wide variety of water and environmental-related problems. WET's service areas focus on projects pertaining to **water**: surface water and ground water issues; natural resource evaluation; water resource monitoring, development, and planning; land development; site investigation; and site remediation. WET's principals have strong applied educational backgrounds in Environmental Engineering, Geological Engineering, Geophysical Engineering, Hydrogeology, Engineering Science, Earth Science, and Geology.

It has been more recently that WET has committed a large part of its time and resources to water quality monitoring and the TMDL arena. As a result, our firm may not have as detailed a resume as some firms who have been assisting in the process to this point. Some services requested in the RFP included areas where WET does not have specific experience; however, we believe our well qualified professional staff and experience on similar projects, as well as our commitment to being involved in the TMDL process, will allow us to perform these services at a high professional level. We ask only that you evaluate our outstanding capabilities and experience in the following requested service areas:

Water Quality Monitoring – Fixed Station and Probabilistic Design (3.5.1)

Water Quality Monitoring– Lakes and Streams (3.5.2)

Water Quality Monitoring – Reference Sites (3.5.3)

TMDL Targets (3.5.4)

TMDL Source Assessment/Delineation (3.5.5)

TMDL Load Allocations (3.5.6)

Total Maximum Daily Loads (3.5.7)

Stakeholder Participation (3.5.8)

TMDL Effectiveness Monitoring (3.5.9)

Geographic Information Services (3.5.10)

Water Quality Modeling (3.5.12)

Statistical Analysis (3.5.13)

Revegetation Services (3.5.17)

Watershed Coordination (3.5.18)

Land Use Planning Services (3.5.22)

Successful completion of these services will require a flexible yet disciplined group of professionals who can apply high quality data collection and evaluation techniques under a precise time schedule, while successfully including State representatives and stakeholders in the process. WET has composed a multi-disciplinary Project Team whose comprehensive project experience lends itself well to these types of projects.

WET's Proposed Project Team members have been outlined in Table I (p. 8), with educational background and areas of expertise noted. Detailed information on the Project Team members is located in Section 2.1 and Appendix A.

Our Project Team members have developed strong positive relationships with many regulatory agencies and personnel throughout their careers, and we believe that this track record will prove valuable when performing our services. Our team members are active in various volunteer and conservation groups such as Trout Unlimited, Rocky Mountain Elk Foundation, and local watershed groups, which will aid our ability to communicate the needs of the many conservation groups involved in administering these projects, and to include stakeholder input in the decision making process. Key Project Team members also come from farming and ranching backgrounds, allowing a complete understanding of landowner issues and concerns.

Thank you for your careful evaluation of our proposal. WET is committed to assisting the MDEQ in the development and implementation of TMDL's and watershed planning directives for Montana's waters. We believe that you will have a difficult time finding a more energetic, well-rounded, and qualified Project Team in southwest Montana. The success of the tasks listed in this proposal will rely on a network of qualified partners to assist MDEQ in the monitoring and development of these regulations, and WET is excited at the opportunity to join the TMDL team. We guarantee you will be pleased with WET as an environmental contractor for the State of Montana.

## **2.0 WET PROFILE & EXPERIENCE**

### Contact Information

#### **Water & Environmental Technologies**

1485 Continental Drive Butte, MT 59701 Phone: (406) 782-5220 Number of Employees: 10 Contact Person:

Josh Vincent

[jvincent@wet-llc.com](mailto:jvincent@wet-llc.com)

### Description of Firm

Water & Environmental Technologies (WET) is a full-service environmental consulting and engineering firm located in Butte, Montana. Our business was formed by a diverse group of experienced environmental professionals serving a wide variety of clients throughout Montana and the western United States. Our firm has been in business since 2000, but our staff has worked in the environmental field for many years. WET provides professional environmental services to address water and environmental-related problems for its clients.

WET's team consists of a multi-disciplinary group of highly trained and experienced professionals, scientists, engineers, and technicians. Our professionals have both academic and applied backgrounds in the areas of hydrogeology, hydrology, watershed restoration planning, environmental and geological engineering, earth science, geochemistry, land development, water production, technical writing, as well as others. In addition, our key personnel have attained many professional registrations and advanced training and education, which have furthered their knowledge and perspective on natural resource projects. Continuing education classes have been completed by WET personnel in the following areas over the past four years: environmental geochemistry, geochemistry of metals in water, ground water modeling, environmental forensics, surface water quality, monitored natural attenuation, NPDES storm water permitting, and ArcGIS software training.

## **2.1 WET Project Team**

WET's Project Team has completed a variety of environmental and natural resource projects throughout their professional careers. WET provides turnkey services, including planning, assessment, design, implementation, and reporting, all within the limits of federal and state regulatory agencies. WET also strives to maintain a positive working relationship with these regulatory personnel and to act as a representative for its clients. WET has completed projects for a wide range of clients, ranging from large industrial corporations, to city and county government agencies, to small family-owned businesses. Individually, our key personnel have expertise in a wide range of disciplines, but collectively, our proposed team will work as one cohesive unit to achieve the goals outlined in this proposal. WET's Project Team members will provide the technical expertise and support required to accomplish environmental consulting projects in a timely, professional, and safe manner.



Another factor that distinguishes WET from other firms is its flexibility and availability of staff. WET has the freedom to assign staff and company resources much more easily than its larger counterparts. The following sections describe the experience of WET's proposed Project Team and the duties that they will perform under the various environmental services listed in the RFP. Figure 1 shows an organizational flow chart of WET's proposed Project Team. A summary table of WET's technical staff is also included as Table I (p 8). Complete professional resumes of WET personnel for this project are included in Appendix A.

### **Project Manager - Joshua T. Vincent, PE**

#### **Experience**

Mr. Vincent is a Principal Engineer and the Director of Business Development and Public Relations for WET. Josh has worked in the environmental consulting industry for several years, with a broad range of experience in many project areas. His project management experience encompasses all areas of surface water and ground water characterization, investigation, and remediation; watershed characterization and monitoring; hydrogeologic investigations; nutrient analysis; land development; environmental permitting; remedial project design construction, and oversight; environmental assessments/audits; hazardous waste operations and characterization; and, UST investigations. Josh has also served as a Project Manager and engineer on numerous water quality and land development projects, stream restoration projects, hydrogeologic investigations, contaminated sites, landfill monitoring and design, and contaminant characterization. In recent years, Josh's work experience has focused more closely on surface water bodies, watershed planning and monitoring, and site characterization. As WET's Marketing Director, Josh has performed numerous public presentations, meetings, and client interviews and has a thorough understanding of providing excellent customer service to WET's broad client base.

Josh is also actively involved in community and conservation organizations, such as Trout Unlimited, which will aid in WET's ability to work with conservation groups and stakeholders that are often intimately involved in different watersheds. Josh graduated with a Bachelor of Science degree in Environmental Engineering from Montana Tech. He is a registered Professional Engineer in the States of Montana (#12994PE) and Wyoming (PE#9710).

#### **Project Responsibilities**

Josh will serve as the Project Manager for projects administered under this RFP. He will work closely with agency personnel, stakeholders, and the Lead Technical Coordinator to develop a conceptual design of each project that meets goals and objectives for all parties. Josh will supervise data compilation & analysis, field data collection and monitoring, and development of project reports and conclusions. Josh will also help coordinate and communicate field activities with appropriate State agencies and project stakeholders, including local conservation groups and the general public. Josh will attend project site visits and will present findings at major project meetings, and any public presentations as determined necessary. He will be the primary point of contact for WET.

### **Lead Technical Coordinator – David J. Erickson, PG**

#### **Experience**

Mr. Erickson has over 17 years experience in the environmental consulting field. His education from Montana Tech with a Bachelor of Science degree in Geological Engineering (Hydrogeology) allows him to successfully interact with various technical disciplines. He is a registered Professional Geologist in the States of Wyoming and Utah (Montana has no such registration), and a Certified Professional Geologist with the American Association of Professional Geologists. David has been managing a wide variety of projects for the past several years, and performs management and operations duties for WET. He has been responsible for management of many technical projects over the years, ranging in complexity from multi-state contaminated site remediations to industrial pond expansion projects to lead expert on environmental litigation teams. In recent years, more focus has been given to natural resource damage and mitigation projects. David's primary area of expertise is in investigation, characterization, and mitigation of contaminated natural resources, and in the evaluation, development, and conservation of water resources. His hydrogeology background affords him the education to evaluate complex surface water/ground water interactions. With the ongoing drought in Montana, Dave has recently taken a leading role in many water development projects throughout the State.

This project will require the ability to coordinate data collection and analysis tasks with agency and stakeholder input, and to operate in a team-oriented atmosphere. He is comfortable communicating technical issues in a variety of situations ranging from regulatory meetings to small town hall meetings to a formal courtroom environment.

#### *Project Responsibilities*

As the Manager of WET and the Hydrogeologist with the most diverse work experience and training, Dave will serve as the Lead Technical Coordinator under the tasks of this RFP. He will review and assist in the development of the specific work tasks to accomplish project goals, and will provide technical review of field data and project conclusions. Dave will also assist in selecting the most qualified Technical Support personnel to work on each project, based on the type of service requested. This project will also require interaction with many critical stakeholders, including state agencies, landowners, conservation groups, and the general public. Dave will help to manage and analyze available data from these stakeholders. Along with the Project Manager, he will attend the major project meetings and site visits with agency personnel, as necessary.

#### **Technical Support Staff**

WET has a number of additional highly qualified technical staff members that will assist with project tasks as needed during the course of the project. Under particular service categories listed in the RFP, appropriate staff members will take a lead technical role in the completion of these projects. These situations are detailed in the following text. Descriptions of all Technical Support Staff are included below.

#### [Elizabeth Erickson MS, Principal Hydrogeologist](#)

Mrs. Erickson serves as a Principal Hydrogeologist for WET. She specializes in: ground water and surface water modeling; statistical analysis of technical site data; hydrogeologic investigation and interpretation; geochemical analysis; and, investigation, remediation, and monitoring at ground water contamination sites. Elizabeth has over sixteen years of experience including work as an Exploration Geophysicist with a major oil company, a geophysical consultant, and many years working with hydrogeologic projects in a consulting capacity. Elizabeth's expertise in hydrogeologic modeling using MODFLOW and GMS has gained national recognition. She is also familiar with the WMS program, which is the surface water modeling component of the GMS software. Her ground water model of the Jim Bridger Power Plant in Rock Springs, Wyoming was included at a poster session of the 2001 International Ground Water Modeling Center Conference in Denver. Elizabeth has also become highly skilled in the development of three dimensional visualization models for site characterization purposes, using the EVS proprietary software.

Elizabeth received her Bachelor of Science degree in Geophysical Engineering in 1988, and her Master of Science degree in Hydrogeology in 1995, both from Montana Tech. Her thesis involved the development of a ground water flow model (MODFLOW, USGS, 1988) simulation of a regional intermontane aquifer to determine pumping effects on ground water availability.

#### *Specific Service Area Responsibilities*

For projects pertaining to Statistical Analysis and Water Quality Modeling, Elizabeth will serve as the lead technical representative for WET. Her expertise in statistical data and water chemistry analysis will allow her to analyze datasets and identify significant trends critical to defining non-point source impacts. Elizabeth is also very experienced in several ground water and visualization software packages. She is familiar with a surface water and watershed modeling program (WMS), which may prove useful in watershed characterization and TMDL development tasks.

#### [Matt Vincent, Associate Reclamation Specialist](#)

Matt is affiliated with WET as an Associate Reclamation Specialist. He assists our staff on issues pertaining to site reclamation, revegetation design and implementation, and vegetative monitoring. Matt has over 9 years experience working as a reclamation specialist for Butte-Silver Bow County, providing management, oversight, and monitoring for all reclamation and revegetation issues on the largest Superfund site in the United States. Matt graduated with a degree in Chemistry from Montana Tech in 1995, and is very active in various conservation groups, including the Big Hole River Foundation, Big Hole Watershed Committee, and Trout Unlimited.

### Specific Service Area Responsibilities

Mat will serve as WET's primary technical representative for projects pertaining to vegetation or wetland assessment and monitoring, as well as any revegetation projects. Matt worked as Butte-Silver Bow County's reclamation Specialist for the past seven years, as well as the reclamation and superfund specialist for Granite, Deer Lodge, and Powell counties. Before that, he was a Water Quality Specialist for the Butte-Silver Bow Water Quality District. Matt is well qualified to address both upland and riparian vegetation issues related to watershed characterization.

### Doug Anderson PG, Senior Hydrogeologist

As a Senior Hydrogeologist in WET's Butte office, Mr. Anderson serves as Project Manager and Senior Hydrogeologist on a variety of environmental projects, including site assessments, hydrogeologic investigation and characterization, water well design and construction oversight, design and implementation of ground water monitoring programs, wetlands delineation, and site remediation. He has over 23 years experience in the environmental industry, with both consulting and regulatory experience. Doug's experience includes all phases of remedial design and construction, ground water and surface water investigation and monitoring, water resource planning, well design projects, and soil and water remediation. He also has extensive experience in Phase I Environmental Site Assessments and hydrogeologic investigation procedures. Doug has served on a watershed planning board for the DNRC in the past, and has positive working relationships with many State agencies.

Doug received a Bachelor of Science Degree in Earth Science from the University of South Dakota in 1985, and a Masters Degree in Geology (Hydrogeology Emphasis) from Fort Hays State University in 1989. He is a Registered Professional Geologist in the State of Wyoming.

### Pat Thomson PG, Senior Hydrogeologist

Mr. Thomson is a Senior Hydrogeologist at WET. He has 10 years experience in the engineering/consulting field. Field methods in hydrogeology, contaminant investigations and remediation, and evaluation of ground water and surface water resources are his areas of expertise. Pat's project management experience includes preparing workplans for remedial investigations and corrective actions, design and construction oversight of ground water irrigation wells, preparing reports outlining investigative and monitoring results, and investigating and preparing reports for environmental site assessments/audits. Pat will be called in to review and analyze site data, aid in the development of project workplans, assist with any field data collection activities, and evaluate and develop objectives for the project.

Pat received his Bachelor of Science degree in 1993 from Montana State University. He has worked in the consulting field his entire career and is a Registered Professional Geologist in Utah.

### Tanner Egan, Staff Environmental Engineer

Mr. Egan works as an Environmental Engineer in WET's Butte office. He is responsible for surface water and stream flow monitoring, site investigation, remediation, and monitoring at soil and ground water contaminated sites, air quality permitting and modeling, and environmental site assessments and audits. Tanner is also a registered Site Safety Coordinator and serves as WET's Safety Manager. Before joining WET's team, Tanner worked as an Environmental Engineer with a global consulting company in Seattle. Tanner is a graduate of Montana Tech, receiving his Environmental Engineering degree in 2000.

### Patty Hamblock EI, Staff Engineer

Patty Hamblock works as an Associate Engineer in WET's Butte office. Patty specializes in subdivision permitting and land development, and will also be responsible for environmental site assessments, well surveys and research, and other water-related issues. Patty is very successful in performing technical research, compilation, and organization of large databases for many projects. Patty graduated from Montana Tech, finishing with her General Engineering degree in May of 2001. She is also a registered Engineer Intern (E.I) in the State of Montana.

### WET Qualifications Summary

Table I highlights each WET Project Team member's primary area of expertise, professional degree information, and years of experience. WET's Project Team has over 90 years of combined experience in the

environmental field. Our expertise with surface water and ground water resource projects, and our ability to successfully work with multiple entities in a team atmosphere makes WET a smart choice to become a qualified contractor under the TMDL program. A complete listing of WET employee resumes detailing specific project experience can be found in Appendix A.

**Table I. WET Staff Qualifications Summary Environmental Services Proposal**

<b>Project Managers &amp; Lead Technical Coordinators</b>	<b>Primary Area of Expertise</b>	<b>Educational Background</b>	<b>Years of Experience</b>
<b>David Erickson, PG Lead Technical Coordinator</b>	Hydrogeology, Water Resource Evaluation, Irrigation, Water Well Design	B.S. Geological Engineering	17
<b>Josh Vincent, PE Project Manager</b>	Watershed Planning, Water Quality, Site Investigation	B.S. Environmental Engineering	8
<b>Elizabeth Erickson Principal Hydrogeologist</b>	Water & Geochemical Modeling, Statistical Analysis	B.S. Geophysical Engineering M.S. Hydrogeological Engineering	16
<b>Doug Anderson, PG Senior Hydrogeologist</b>	Water Resource Evaluation, Aquifer Analysis, Wetlands	B.S. Earth Science M.S. Geology	23
<b>Pat Thomson, PG Senior Hydrogeologist</b>	Water Resource Evaluation, Water Monitoring	B.S. Hydrogeology	10
<b>Matt Vincent Associate Reclamation Specialist</b>	Site Reclamation, Revegetation, and Monitoring	B.S. Chemistry	9
<b>Tanner Egan Staff Engineer</b>	Stream Flow Monitoring, Site Investigation	B.S. Environmental Engineering	5
<b>Patty Hamblock, EI Staff Engineer</b>	Engineering Permitting	B.S. General Engineering	3

## **2.2 Method of Providing Service – Nutrient Source Assessment**

WET has chosen the Nutrient Source Assessment of the upper Silver Bow Creek Watershed as good example of how the WET Project Team implemented a project similar to the type listed in this RFP. The project was performed for Butte-Silver Bow (BSB) County through a grant administered by the Tri-State Water Quality Council (TSWQC). WET was contacted by BSB and the TSWQC about completing the project in August of 2002, which was being performed as part of BSB's commitment to the Voluntary Nutrient Reduction Program (VNRP) for the upper Clark Fork River. Butte's Wastewater Treatment Plant (WWTP) effluent is one of four primary point source contributors to the upper Clark Fork system. The project started in September of 2002 and was completed in May of 2004.

The first step in the process was to meet with BSB and TSWQC personnel and discuss the goals and objectives of the project, which were to determine if any point or non-point source nutrient contributors were present in the upper Silver Bow Creek Watershed. The following primary goals were developed by WET:

- 1.) Review historical data to characterize water conditions in the Silver Bow Creek Watershed.
- 2.) Implement a nutrient monitoring program at selected locations in the upper portion of the watershed.
- 3.) Identify nutrient source areas based on early monitoring results and adjust plan as necessary.
- 4.) Develop a watershed map identifying nutrient loading and source areas, including nitrogen and phosphorus.
- 5.) Prepare a final report with a detailed nutrient analysis and develop management

recommendations for BSB. 6.) Present the study results to local government officials, interested parties, and stakeholders in the basin.

With input from BSB, WET then developed a surface water monitoring network focused on identifying known or suspected nutrient source areas. A monthly monitoring program was implemented by WET, consisting of the collection of stream flow, water quality, and nutrient monitoring data. BSB and TSWQC personnel were updated with monthly emails on project tasks, and quarterly meetings were organized by WET's Project Team to review project data and discuss preliminary findings. Minor adjustments to the monitoring program were implemented in order to optimize data collection activities while staying within the limits of the grant budget.

After completion of the monitoring program, WET calculated nutrient loading throughout the project area, and performed various analyses of site data to determine point and non-point source impacts to the stream, as well as to identify impacts of seasonal flows and storm events. These impacts were identified and depicted on nutrient maps developed using GIS, and specific recommendations for reducing these impacts were developed and suggested to BSB officials. A comprehensive draft report was prepared and submitted to BSB and TSWQC for review before a final draft was completed. WET prepared a PowerPoint presentation and presented the study results to the BSB Technical Review Committee, which consisted of department heads and officials from all major county divisions.

Completion of the project provided BSB officials with critical data to help identify and explain unusually high nutrient levels in the Butte valley. The report also included specific recommendations on ways to reduce nutrient loading to Silver Bow Creek, as well as ideas for long term management and funding sources for BSB to manage these issues.

This project provides specific examples of WET's team oriented approach to the successful completion of a project. Our Project Team was able to encourage and include input from the project stakeholders, while providing direction of critical project tasks to ensure that goals and objectives were obtained. We encourage you to call BSB officials, as we are confident they were very pleased with WET's performance on the project.

### 3.0 PROPOSED SERVICE CATEGORIES

#### 3.1 Description of Proposed Services

We believe WET's unique combination of educated staff personnel and broad company work experience qualifies us to work under several of the service categories in the RFP. We would like our outstanding capabilities to be evaluated for the following service categories, as listed in Table II below. This table corresponds to Appendix C in the RFP.

**Table II. Identification of Services Appendix C: Environmental Services Proposal**

<b>Water &amp; Environmental Technologies Proposed Service Areas</b>		
<b>SERVICES MATRIX</b>	<b>YES</b>	<b>NO</b>
Water Quality Monitoring – Fixed Station & Probabilistic Design	X	
Water Quality Monitoring – Lakes and Streams	X	
Water Quality Monitoring – Reference Sites	X	
TMDL Targets	X	
TMDL Source Assessment/Delineation	X	
TMDL Load Allocations	X	
Total Maximum Daily Loads	X	
Stakeholder Participation	X	
TMDL Effectiveness Monitoring	X	
Geographic Information Systems (GIS) Services	X	
Remote Sensing		X
Water Quality Modeling	X	
Statistical Analysis	X	
Analytical Laboratory Services		X

DEQ Electronic Data/Information Technical Assistance		X
Heavy Equipment Operators		X
Revegetation Services	X	
Watershed Coordination	X	
Communication/Education Services – Information & Education		X
Communication/Education Services – Contract Administration		X
Communication/Education Services – Information Transfer & TMDL Technical Editing		X
Land Use Planning Services		X
Preparation of Technical Manuals or Circulars		X

### 3.2 Project Team Flow Chart

WET has included a Project Team Flow Chart that details WET's proposed Project Team chosen to accomplish project goals and interact with project stakeholders. The chart provides a breakdown of the WET personnel responsible for all service categories listed in the RFP, except where specifically noted. Obviously, each project will have its own set of circumstances that will require specific tailoring of the Project Team and work plan to meet objectives, but this flow chart provides the base structure of the WET Project Team.

### 3.3 Recent Contract Awards

In addition to the Client references and project descriptions detailed in Section 3.1, WET has recently been selected as a technical review contractor for the Renewable Resource Grant and Loan Program, administered by the Department of Natural Resources and Conservation (DNRC). As we have not yet performed any work under this contract, we did not include it in our Project References. We believe our selection for this contract solidifies our reputation as a highly qualified and competent firm, fully capable of performing work under a State contract or grant program.

WET has also recently been contracted by the Jefferson River Watershed Council (JWRC) to perform seasonal stream flow monitoring on the Jefferson River. Flow will be monitored at eight locations on a weekly basis, to provide data to support implementation of the JWRC's Drought Management Plan.

## 4.0 PROJECT REFERENCES

WET has selected the following project references which illustrate its capabilities and expertise to complete the service types listed in the RFP. Some descriptions are of specific projects, while others encompass several projects of a particular type. Most of these references are Clients that have continued to use WET for many years because of our high quality work and reasonable prices. These projects stress WET's technical expertise working on water quality issues, as well as our ability to work within a team environment with regulatory involvement.

In order to keep this proposal as short and focused as possible, project references have only been listed once; however, some projects have been included under multiple service categories. On multiple projects performed for the same client, the reference information is only listed once as well. *A Project Reference Matrix has been included as Figure 2, in order to help reviewers link project references with identified service areas.*

### 4.1 Watershed Restoration Project – German Gulch Watershed

#### Contact Information

Pat Munday, GGTU President  
1300 West Park Street  
Butte, MT 59701  
(406) 496-4461

WET has been under contract with the George Grant Chapter of Trout Unlimited since 2002 to provide technical oversight and project management of a large scale stream restoration project in the German Gulch watershed. The project is currently being administered with a Project Development Grant from the Natural Resource Damage Program (NRDP). German Gulch is home to a population of native westslope cutthroat trout. As a genetically pure population, these fish are the ideal seed stock for the eventual re-population of a



restored Silver Bow Creek. Also, German Gulch was heavily placer mined over the past century. The streambed, riparian, and upland areas suffered extensive damage from this activity.

The Project Development Grant has resulted in conceptual designs for channel reconstruction, bank stabilization, riparian and upland habitat improvements, revegetation, non-motorized public access, enhancements to benefit the fishery in Silver Bow Creek, and long-term protection of natural and cultural resources. The full-scale restoration project will also consider the whole watershed for opportunities such as conservation easements, vegetation restoration, and placer mining claim purchases. The various tasks associated with this grant have necessitated the consultation with several local, state, and federal agencies, including Butte-Silver Bow County, Greenway Service District, Fish, Wildlife & Parks, Natural Resource Conservation Service, and the United States Forest Service.

WET is providing grant management and technical review services associated with the grant. The project has required the supervision and management of numerous subcontractors, coordination with regulatory and agency personnel, presentation of project tasks to the general public, and project reporting and submittal to the NRD and TU staff. WET will also provide technical services to aid in the preparation of the full NRD grant application in 2005.

#### **4.2 Nutrient Source Assessment – Upper Silver Bow Creek Watershed**

##### **Contact Information**

Bob Farren  
BSB Public Works – Metro Sewer Department  
Courthouse, West Granite Street  
Butte, MT 59701  
(406) 497-6476

WET designed and implemented a nutrient source assessment monitoring and analysis plan of the upper Silver Bow Creek watershed and its tributaries. The project utilized a combination of historical data review, monthly water quality monitoring, and nutrient analysis to identify potential point source nutrient loading in the upper reaches of Silver Bow Creek, its headwater streams, and specific tributaries. Nutrient management on Silver Bow Creek, the primary headwater stream of the Clark Fork, is a key to improving water quality in the watershed. High nutrient loads in the upper Clark Fork River basin are a primary contributor to nuisance algae developments in the middle and lower stretches of the river. These high levels are also detrimental to the long term goal of restoring a healthy fishery in Silver Bow Creek.

Goals of the project were to identify point source and non-point source loading of nutrients into the upper reaches of the watershed, and to develop nutrient management recommendations for the Butte-Silver Bow government. Butte-Silver Bow County is performing the nutrient studies as part of a multi-task effort to meet target nutrient levels for the Voluntary Nutrient Reduction Program (VNRP) for the Clark Fork and Pend O'Reille watersheds.

#### **4.3 Huntington Power Plant – Huntington, Utah**

##### **Contact Information**

Tony Hiatt PE  
1407 W. North Temple  
Salt Lake City, UT 84140  
(801) 220-2567

WET is currently conducting a site wide investigation of all potential source areas (PSAs) at the Huntington Power Plant facility. The planning phase of the project involved identifying all areas that could affect ground water or surface water quality at the site and designing an investigation that identified the impact, defined the extent of contamination, and differentiated between background conditions and facility impacts.

Of specific concern was the effect of process water on surface flows in a small drainage at the site. Using geochemical tracers and a chloride balance, WET was able to isolate the source of the contamination,

describe the flow path from ground water to surface water, determine the increased salt load on the nearby stream, and move forward with mitigation measures to reduce the impact.

The project involves synoptic flow measurement, geochemical separation of water types, geochemical modeling of mixing scenarios, and a complete understanding of ground water/surface water interaction.

#### **4.4 Surface Water Resource Evaluation – Lewistown, MT**

##### **Contact Information**

Roger Frickle  
Edwards, Frickle, Baker-Hughes, Cook  
1601 Lewis Avenue  
Billings, MT 59101  
(406) 256-8155

WET implemented a watershed study in the North Moccasin Mountains near Lewistown, Montana. Several drainages were studied (Little Dog, South Fork of Little Dog, Dog, and Last Chance) to identify potential water resource impacts caused by the operation of a former gold mine. The study included monitoring of ground water elevations in the alluvial aquifer, stream flow gauging, and identification of plant species in the drainages. WET organized a multi-disciplined team to perform the required project tasks. A geologist was used to study the regional and local geologic conditions. A hydrogeologist constructed the conceptual model of the site and supervised the installation of monitoring wells, collection of surface water and ground water samples, and performed monitoring of the wells. A biologist characterized the native plant species and identified areas where the plants were stressed from changes to and lack of stream flow.

WET's Project Team was able to identify the physical and biological effects of pumpback systems and ground water contamination on downgradient properties, and more importantly, on the grandfathered water rights of downgradient farm and ranch properties. Historical information and monitoring indicated that reliable and sustained flows occurred in the drainage throughout the last 100 years.

A complete basin analysis identified and documented the factors impacting the drainage as being a direct result of mining operations. Mining activities in the upland area of the range had removed the surface water connection between the higher elevations where snow pack and storm events feed and replenish stream flow. After the onset of mining operations, storm water and runoff enter the open pits and are routed to a deeper bedrock aquifer, effectively reducing the recharge area by more than one-third. Also, pumpback systems constructed to recover ground water contaminated by mining activities have dewatered the ground water and surface water at the headwaters of multiple drainages. The net result was millions of gallons of water per year removed from each drainage, thereby decreasing the amount available for base stream flow.

WET's study established baseline flow rates for one drainage and proposed mitigation measures to transport spring runoff and snow melt across the mine property and back into the drainage. Since that time, flows have increased in the creek and ground water levels are rapidly recovering to pre-mining conditions. A second phase of the project is underway, with a WET team in the process of studying additional drainages and determining the preferred mitigation measures for each drainage.

#### **4.5 Flat Creek Investigation & Evaluation – Superior, MT**

This project directly presents WET's ability to identify and solve complex, geologic, hydrogeologic and hydrologic problems, where at least 4 other consultants have investigated without the expertise or personnel to understand real world ground water/surface water interactions.

WET was contracted to determine the effects of a historical mining operation on the surface water and ground water in the Flat Creek Drainage. The Iron Mountain Mine and Mill site began operation around the turn of the century. Milling operations discharged tailings directly into the Flat Creek Stream and drainage for over 100 years. The tailings now occupy eight miles of the floodplain and stream bank, contributing metals-laden sediments to the surface water, and leaching metals into the ground water.



WET has investigated the extent, volume and characteristics of the tailings deposits using direct push technology to minimize the disturbance to the flood plain and field analytical methods (Portable XRF) to reduce investigation costs. Surface water flow and contaminant characteristics have been studied for two years using synoptic flow gauging and water quality monitoring at fixed stations along the stream. The overall goal of the project was to identify and evaluate the connection between the contaminated sediments, surface water, and area ground water that supplies the Town of Superior.

The data was assembled and interpreted to determine areas of the stream where ground water and surface water interacted in a manner that could result in contaminated stream water directly impacting the area's ground water. Once these areas were identified, WET conducted a tracer study to determine the degree of connection and contaminant pathways into the Town water supply. A salt tracer was dissolved into a losing reach of the stream. Monitoring of chloride concentration in the stream and in the ground water continued for a two month period to identify the quantity of chloride in the system. This test established a positive, indisputable connection between contaminated surface water and the ground water supply for the Town of Superior.

#### **4.6 Jim Bridger Power Plant, Point of Rocks, WY**

##### **Contact Information**

Jeff Tucker PE  
1407 W. North Temple  
Salt Lake City, UT 84140  
(801) 220-2989

Large settling ponds at this power generating facility have received fly ash for over twenty years. The addition of over 400 acres of surface water ponds has impacted not only the ground water, but also the surrounding high plains watershed. These impacts include Total Dissolved Solids concentrations approaching 200,000 ppm and the creation of several hundred acres of wetlands. WET was retained to model these impacts and to predict the future impact resulting from an additional 40 years of use. The site was very difficult to characterize and model due to the following conditions:

- Complex geology - multiple (4) bedrock aquifers, alluvial channels, and faults;
- Naturally-occurring constituents that are similar in nature to contaminants;
- Complex surface water features – ephemeral drainages, wetlands, evaporation basins;
- Large industrial site with many potential source areas –ponds, landfill, coal storage areas;
- Non-heterogeneous, non-isotropic and non-horizontal flow conditions; and
- Time-variant contaminant loading.

Three-dimensional transient ground water flow and contaminant transport models were developed for the site using MODFLOW and the graphical user interface, GMS. The transport model used the flow model information to simulate contaminant species introduced in the flow regime from the surface water ponds. The model was used to predict future impacts to the site and to design a remediation system to pump contaminated ground water back into the settling ponds.

WET prepared a Pond Expansion Permit for the Plant, which included studying the expansion of the current pond system and identifying hydrogeologic and contaminant transport effects from the new ponds. The permit application was a comprehensive technical document, requiring organized presentation and close cooperation with local and state agencies.

#### **4.7 Water Resource Projects, Various Locations in MT**

Water & Environmental Technologies is experienced in all aspects of private, public, and industrial water development and use. Since the company's inception, WET has designed, constructed and tested at least ten water supply or water use systems every year. These systems range from small private water supplies, to public supply wells, to private water bottling companies, to ground water source heating/cooling, to industrial supply, to impacted water recovery systems.

Included in each water development project are detailed monitoring activities to determine any impacts on surrounding surface water or watershed resources. WET personnel have also supplied water rights permitting and appropriation services on many water wells and well systems. Our staff is experienced in completing the initial application and answering any questions regulatory officials have on the system performance or long term operation.

Our hydrogeologists have over 20 years of experience with water supply well design, dating back to the late the late 1980's. WET's hydrogeology professionals have:

- Developed wells in all types of aquifers (bedrock, gravels and fine grained alluvium),
- Installed wells and monitoring systems in all geologic environments,
- Tested aquifer characteristics, and
- Evaluated pumping impacts and basin wide effects of many water supply systems.

#### **4.8 Dave Johnston Power Plant, Glenrock, WY**

WET personnel have provided water resource and landfill consulting services at the DJ Facility since 1991. A detailed stratigraphic study defined the surface and ground water flow system and chemical characteristics of the area's water resources.

The DJ facility consists of five separate disposal areas, in addition to surface water ponds and coal storage areas. Impacts from the facility have migrated along a paleo-channel of a nearby river and impacted surface water. The surface/ground water interaction at the site is complex due to the varying depositional stages of the alluvium from the river and the underlying erosional bedrock surface. Definition of the surface and ground water system was needed to understand the complex contaminant migration pathways present at this facility.

Leaching column tests were completed to fingerprint the chemical composition of water in contact with suspected source materials. This study allowed identification of contaminant sources at the facility. Statistical and geochemical modeling of the site resulted in a complete understanding of flow system and contamination at the facility.

Operational changes were recommended and implemented to reduce impacts to the surrounding watershed. These long term operational changes have included: pond lining, combustion waste landfill cover modifications, and changes in dust suppression methods.

While impacts are present, WET's detailed characterization of the site has allowed regulatory agencies to identify the risks associated with these impacts and to accept appropriate remedial alternatives.

#### **4.9 Naughton Power Plant, Kemmerer, WY**

WET personnel have provided water resource and combustion ash disposal consulting for the Naughton Power Plant since 1991. As disposal regulations and water conditions changed at the site, WET aided in maintaining site compliance and understanding site hydrogeologic and geochemical conditions. Consulting services include analysis of water quality data from both surface water and ground water sources and geochemical analysis of water quality data to determine facility impacts. Based on these analyses, recommendations for operational changes to reduce impacts to surface and ground water resources were made. Site conditions have been communicated to state agencies through annual ground water monitoring reports. WET personnel also completed the latest permit renewal application for the industrial waste landfill. This documented understanding, along with open communication with WDEQ, has allowed WET to reduce monitoring frequency, reduce sample parameters, reduce reporting requirements, and obviously, reduce annual costs associated with environmental monitoring.

#### **4.10 Water Quality Monitoring, Little Bitterroot Lake, MT**

##### **Contact Information**

Dave Larson  
Little Bitterroot Lake Association (LBLA)  
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Olney, MT 59927  
(406) 881-3030

WET prepared a watershed monitoring and management plan for the Little Bitterroot Lake watershed. The goal of the watershed plan was to accomplish the following directives:

- Develop ecologically sustainable programs and goals to protect lake water quality, recreational activities, and downstream receptors;
- Establish a consistent background watershed environment for water quality efforts and for the protection of beneficial uses; and
- Help facilitate and guide future plans for the watershed by setting natural resource protection as a top priority.

Development of the watershed protection plan consisted of three phases, each equally important in providing comprehensive information resulting in the best possible management practices for the watershed. Phase one consisted of providing a detailed physical and technical characterization of the watershed, in order to provide a reference point for selecting and planning monitoring intervals, sample locations, and summarizing hydrologic information.

Phase II identified the dominant physical, biological, and human processes that may presently or in the future be affecting the watershed's function and condition. The initial task in this phase used data compiled in the Research Phase to stratify the watershed into subareas. Informational resources such as historical maps, research papers, and vegetation conditions provide knowledge of prior influences that may have changed the landscape. These data were used to identify specific parameters in need of monitoring. A water quality monitoring program was developed to generate a water quality baseline for the lake. Data from the monitoring program will be compiled and analyzed to identify water quality trends to assist with identifying impacts that may be occurring. The program consisted of collecting water samples at seven lake locations, plus the inflow and outflow.

Phase III was to consist of a summary report with recommendations for future management practices and watershed plan objectives, such as protection of sensitive areas and resources, restoration of affected areas, and re-evaluation and continuation of the monitoring program. Due to a funding shortfall, only Phase I and part of Phase II were completed, with only one year of monitoring data collected.

#### **4.11 Source Water Protection Plan, Anaconda, MT**

##### **Contact Information**

Karen Solberg  
Anaconda-Deer Lodge County Planner  
800 South Main Street  
Anaconda, MT 59711  
(406) 563-4067

WET has provided a wide range of environmental consulting services for Anaconda-Deer Lodge County (ADLC) over the past several years, most recently a source water delineation and assessment report for the city of Anaconda. The assessment project included a comprehensive technical evaluation of the town's water resources in the Warm Springs Creek Valley. In order to accomplish this task, WET conducted a watershed study of the valley west of Anaconda, to identify point and non-point source impacts from residential development, historic mining operations and agriculture. Assessment tasks included ground water and surface water quality monitoring, soil sampling, evaluation of the West Valley aquifer hydraulic parameters and

estimation of surface and ground water volumes; construction of a ground water flow model showing a time-variant capture zone for the well field; identification of potential contamination sources within or near the capture zone and recommendations for source water protection; submitted in a final report format to both county and state officials.

#### **4.12 Mine Reclamation, Philipsburg, MT**

WET provided water quality monitoring, reclamation design, and construction oversight for mine reclamation project near Philipsburg, Montana. Several illegal ponds and ditches were excavated across the site, which mobilized and exposed historic mine tailings. WET conducted water quality sampling of the ponds and Fred Burr Creek to determine the extent of metals contamination. Working in conjunction with the EPA, WET proposed and directed reclamation of the site, which included removal of mine tailings in the riparian zone which were impacting Fred Burr Creek, backfilling of the contaminated ponds, and capping of upland tailings areas. The riparian tailings areas were hauled to an on-site repository, and upland tailings areas were capped and reseeded to promote vegetative cover.

#### **4.13 Silver Bow County Reclamation & Revegetation Projects, Butte, MT**

##### **Contact Information**

Jon Sesso, Director  
Butte-Silver Bow Planning Department  
Courthouse, West Granite Street  
Butte, MT 59701  
(406) 497-6254

Matt Vincent, Associate Reclamation Specialist with WET, has provided reclamation design, construction oversight, and vegetation monitoring on many sites throughout Silver Bow County. Sites have ranged from mine waste dumps, which were properly capped and vegetated, to riparian areas along Silver Bow and Blacktail Creeks. Matt also conducted annual monitoring of these sites, to ensure proper vegetative cover, mine cap integrity, and minimal sediment runoff. Other project tasks included successful interaction with many project stakeholders, including landowners, responsible parties, local government officials, regulatory agencies, and the general public.